REMARKS

Claims 1-29 are pending in the application. Claims 1-29 are rejected.

IDS

In the Office Action the 1449 form of the IDS filed on October 2, 2000 was returned as not considered. The Office Action indicates that copies of the references were not submitted along with the IDS.

It is respectfully submitted these references were submitted to the U.S. Patent and Trademark Office and these references should be considered.

Attached is a copy of the returned receipt postcard from the U.S. Patent and Trademark Office which indicates that the three U.S. references, three foreign references, and U.K. partial Search Report were received by the U.S. Patent and Trademark Office. The return receipt postcard is dated October 4, 2000 by the OIPE.

Attached to this response is another copy of the 1449 form, six references and partial search report for the convenience of the Examiner. It is respectfully requested the references be considered and the 1449 form returned indicating the consideration.

Prior Art Rejections

Claims 1-3, 5-12, and 14-29 are rejected under 35 U.S.C. § 102(e) as being anticipated by Khan et al. (U.S. 6,029,046). The cited reference describes a game system where game data is downloaded into a device such as an SRAM where it is stored for a time during play and may be checked for errors then transferred to a FLASH memory.

The cited reference does not indicate or suggest that the SRAM and FLASH are controlled so that active and backup roles will alternate between the two devices. In fact the reference teaches that the functions associated with each device are fixed and do not

alternate between the devices. The Office Action appears to point to both Figs. 2A and 2B, however these are two different embodiments and there is no suggestion of control so that the active and backup roles of each memory will alternate with each other.

Applicant's claim 1 recites: "said first memory means and second memory means are controlled so that the active and backup roles will alternate with each other at every churning key updating time point at which an updated churning key becomes effective."

The Office Action is equating the home game adapter 177 of Kahn with the claimed ONU, SRAM 260 in Fig. 2B with the claimed first memory means, and the flash memory 255 with the claimed second memory means. The Office Action points to column 8, lines 51-61 to show the first and second memory means alternating from active and backup roles. However, nowhere in the cited reference and particularly column 8 is it described that the SRAM 206 and memory 214 alternate as to the active and backup rolls.

Further there is no suggestion that the roles will alternate with each other at every churning key updating time point at which an updated churning key becomes effective. In Kahn, the roles of SRAM 216 and memory 214 are fixed. In contrast applicant provides the claimed feature which provides the claimed first and second memory means are functionally symmetric, but Kahn's SRAM 216 and memory 214 are not.

Referring next to the system shown in Fig. 2B of Kahn, received game data goes first to SRAM 260 and then moved to FLASH 255 after checking. The game data is read out of the FLASH 255 when it is used in game play. As such, the roles of SRAM 260 and FLASH 255 are fixed in Kahn's system described in Figure 2B.

As described above, the controlled alternating roles of two memories are not

taught by the systems shown in Fig. 2A and Fig. 2B, singly or in combination. Kahn thus fails to teach the claimed first and second memory means alternating in the active and backup roles.

In addition with regard to claim 1, the combination of features provides that the active storage is referenced by the data dechurning means, while the backup storage is updated with new information ("newly updated churning parameters") sent from the OLT. Claim 1 recites: "according to the churning parameters stored in said first or second memory means currently playing the active role, the churning parameters being activated at the beginning of a frame subsequent to the churning key updating time point."

The cited reference never suggests that the active storage is being read and only the backup storage is subject to update. In addition nowhere in the cited reference is it suggested that "the churning parameters being activated at the beginning of a frame subsequent to the churning key updating time point." The Office Action points to col. 12, lines 1-11, however this only describes that the game data is decrypted and forwarded on for further processing. There is no information which indicates churning parameters being activated at the beginning of a frame subsequent to the churning key updating time point.

Referring first to Fig. 2A of Khan, SRAM 216 is fully referenced and updated as active storage of game data during game play, while memory 214 serves only as a backup of SRAM 216. In the present claimed invention, on the other hand, the active storage is referenced by the data dechurning means, while the backup storage is updated with new information ("newly updated churning parameters") sent from the OLT. As an example,

the active storage is read-only, and only the backup storage is subject to update, unlike the system shown in Fig. 2A of Khan.

For at least the foregoing reasons it is respectfully requested the rejection of Claims 1-3, 5-12 be withdrawn.

With regard to claims 14-29 being rejected as anticipated over Kahn it is respectfully requested the rejection be withdrawn for at least the following reasons:

Independent claim 14 includes the features of claim 15, which has been cancelled. Claim 14 includes the distinguishing features of, for example, the flag control means clears the initial parameter delivered flag when the receiving end is in a standby state, and sets it at the end of an initial parameter delivery process that delivers an entire set of the current churning parameters to the receiving end.

For example, once the flag is set, the OLT will never send the same churning parameters to the same ONU again. This feature prevents the OLT from wasting time in sending churning parameters to every active ONU many times.

Kahn's global flag as described in col. 21, lines 4-6, does not teach such function and effect of the initial parameter delivered flag of claim 14. Kahn provides no information concerning the receiving end is in a standby state nor is there any teaching concerning setting the flag at the end of an initial parameter delivery process that delivers an entire set of the current churning parameters to the receiving end.

In fact Kahn in col. 21, lines 4-6 only describes checking the global flag and provides no details of setting or clearing the global flag of Kahn.

Claim 23 has been written in independent form and incorporates the limitation of claim 25 therein. The amended claim 23 recites overwriting of churning parameters, as

well as suspension thereof, which are not taught by Kahn.

The Office Action cites the decoder 301 from Kahn. However it is submitted that this is completely different from claim 23 since the decoder 301 from Kahn is at the receiving end, whereas applicant's claimed invention recites the claimed OLT is at the transmitting end.

Claim 29 has been written in independent form and claim 28 has been amended such that claim 28 is dependent on claim 29. It is noted that applicant's claimed "churning parameter updating means for updating the churning parameters at a churning key updating time point where the churning key is updated" is not taught in the cited reference. In addition a specific rejection of this feature could not be found in the Office Action.

In view of at least the foregoing it is respectfully requested the rejection of claims 14-29 be withdrawn.

Claim 13 is rejected under 35 U.S.C. § 102(e) as being anticipated by Wasilewski et al. (U.S. 6,424,714).

It is respectfully submitted that applicant claims an optical network unit at the downstream end of a network In contrast the cited reference only describes the program-providing end of a game system, as opposed to claim 13.

For example applicant claims churning parameter memory means for storing received churning parameters that indicate which logical connections are churned or not churned. The Office Action points to col. 20, lines 46-50, however there is nothing in this section concerning storing received churning parameter. In fact the only mention is of a FIFO for buffering packets for transmission back to the control card 22 and also of

determining which packets need to be encrypted and what to do for encryption.

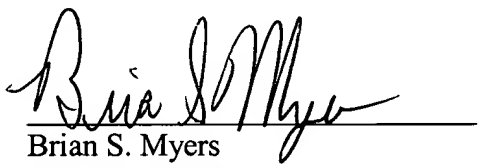
In addition applicant's claim 13 recites: "the stored churning parameters being activated at the beginning of each frame, whereby an update having been made thereto in a specific frame becomes effective in the next frame." Wasilewski also fails to teach this feature of applicant's claimed invention. Col. 8, lines 9-11 only describes the three levels of encryption and states nothing concerning activating stored churning paramenters.

Claim 4 is rejected under 35 U.S.C. § 103(a) with a combination of Khan in view of Wasilewski. For at least the reasons described above with regard to claim 1 and the Khan et al. reference and claim 13 and the Wasilewski et al. reference likewise apply to claim 4.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,



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